

MMWCAS-DSP-EVM

| Designator | Quantity | Value | Description | PackageReference | PartNumber | Manufacturer | Alternate PartNumber | Alternate Manufacturer |
|---|----------|--------|--|------------------|--------------------|--------------|----------------------|------------------------|
| !PCB1 | 1 | | Printed Circuit Board | | PROC055 | Any | | |
| C1, C2, C137, C624, C625 | 5 | 47uF | CAP, CERM, 47 uF, 10 V, +/- 10%, X7R, 1210 | 1210 | GRM32ER71A476KE15L | MuRata | | |
| C3, C6, C9, C12, C15, C18, C21, C28, C31, C34, C35, C38, C41, C44, C47, C50, C53, C56, C63, C66, C69, C70, C73, C76, C79, C82, C85, C88, C91, C94, C97, C100, C101, C104, C107, C110, C113, C116, C119, C122, C125, C128, C131, C132, C143, C248, C253, C364, | 197 | 0.1uF | CAP, CERM, 0.1 uF, 6.3 V, +/- 10%, X7R, 0402 | 0402 | GRM155R70J104KA01D | MuRata | | |
| C4, C7, C10, C13, C16, C19, C22, C29, C32, C36, C39, C42, C45, C48, C51, C54, C57, C64, C67, C71, C74, C77, C80, C83, C86, C89, C92, C95, C98, C102, C105, C108, C111, C114, C117, C120, C123, C126, C129, C133, C369, C375, C382, C390, C393, C400, C403, | 49 | 0.01uF | CAP, CERM, 0.01 uF, 25 V, +/- 10%, X7R, 0402 | 0402 | GCM155R71E103KA37D | MuRata | | |
| C5, C8, C11, C14, C17, C20, C23, C40, C43, C46, C49, C52, C55, C58, C75, C78, C81, C84, C87, C90, C93, C106, C109, C112, C115, C118, C121, C124 | 28 | 1000pF | CAP, CERM, 1000 pF, 16 V, +/- 10%, X7R, 0201 | 0201 | GRM033R71C102KA01D | MuRata | | |
| C24, C25, C26, C59, C60, C61, C426, C432, C439, C450, C471, C501, C502, C504, C505 | 15 | 4.7uF | CAP, CERM, 4.7 uF, 10 V, +/- 20%, X7R, 0603 | 0603 | GRM188Z71A475ME15D | MuRata | | |

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|---|----------|--------|--|------------------|--------------------|------------------------------|----------------------|------------------------|
| C27, C62, C152, C154, C156, C158, C198, C202, C203, C204, C205, C206, C207, C208, C209, C210, C211, C212, C213, C214, C215 | 21 | 2.2uF | CAP, CERM, 2.2 uF, 16 V, +/- 10%, X5R, 0402 | 0402 | GRM155R61C225KE11D | MuRata | | |
| C30, C33, C37, C65, C68, C72, C96, C99, C103, C127, C130, C134, C142, C148, C351, C352, C353, C354, C357, C361, C362, C363, C370, C376, C383, C391, C392, C401, C402, C570, C571, C606, C610 | 33 | 1000pF | CAP, CERM, 1000 pF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402 | 0402 | AC0402KRX7R7BB102 | Yageo | | |
| C135 | 1 | | 0.1µF ±10% 50V Ceramic Capacitor X8L 0603 (1608 Metric) | 0603 | GCM188L81H104KA57D | Murata Electronics North Ame | | |
| C136, C141, C144, C145, C146, C150, C151, C153, C157, C266, C273, C280, C287, C294, C301, C319, C326, C333, C340, C349, C355, C359, C427, C522, C528, C534, C540, C545, C550, C559, C562, C575, | 36 | 10uF | CAP, CERM, 10 uF, 10 V, +/- 20%, X7T, 0603 | 0603 | GRM188D71A106MA73D | MuRata | | |
| C138 | 1 | 4700pF | CAP, CERM, 4700 pF, 25 V, +/- 10%, X7R, 0402 | 0402 | CC0402KRX7R8BB472 | Yageo | | |
| C139 | 1 | 12pF | CAP, CERM, 12 pF, 50 V, +/- 5%, C0G/NP0, 0402 | 0402 | CL05C120JB5NNNC | Samsung Electro-Mechanics | | |
| C140 | 1 | 3300pF | CAP, CERM, 3300 pF, 50 V, +/- 10%, X7R, 0402 | 0402 | CC0402KRX7R9BB332 | Yageo | | |
| C147, C149, C261, C262, C263, C264, C265, C315, C316, C317, C318 | 11 | 0.1uF | CAP, CERM, 0.1 uF, 10 V, +/- 10%, X7R, 0402 | 0402 | CL05B104KP5NNNC | Samsung Electro-Mechanics | | |
| C155, C159 | 2 | 560pF | CAP, CERM, 560 pF, 50 V, +/- 10%, X7R, 0402 | 0402 | CL05B561KB5NNNC | Samsung Electro-Mechanics | | |
| C160, C161, C469 | 3 | 0.1uF | CAP, CERM, 0.1 µF, 50 V, +/- 20%, X7R, 0402 | 0402 | UMK105B7104MV-FR | Taiyo Yuden | | |
| C162, C163, C468 | 3 | 1uF | CAP, CERM, 1 µF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805 | 0805 | GCM21BR71H105KA03K | MuRata | | |
| C164, C165, C466 | 3 | 10uF | CAP, CERM, 10 uF, 25 V, +/- 10%, X7S, 0805 | 0805 | GRM21BC71E106KE11L | MuRata | | |
| C166 | 1 | 0.22uF | CAP, CERM, 0.22 uF, 16 V, +/- 10%, X7R, 0805 | 0805 | 0805YC224KAT2A | AVX | | |
| C167 | 1 | 2.2uF | CAP, CERM, 2.2 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 1206 | 1206 | GCM31CR71H225KA55L | MuRata | | |

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|--|----------|---------|--|--------------------|------------------------|---------------------------|----------------------|------------------------|
| C168, C170, C184 | 3 | 22uF | CAP, CERM, 22 uF, 25 V, +/- 10%, X7R, 1210 | 1210 | GRM32ER71E226KE15 L | MuRata | | |
| C169, C177 | 2 | 0.22uF | CAP, CERM, 0.22 uF, 16 V, +/- 10%, X7R, 0402 | 0402 | CL05B224KO5NNNC | Samsung Electro-Mechanics | | |
| C171, C172, C173 | 3 | 220uF | CAP, TA, 220 uF, 6.3 V, +/- 10%, 0.7 ohm, SMD | 7343-31 | T491D227K006AT | Kemet | | |
| C174, C200, C216, C217, C220, C222, C224, C226, C228, C230, C232, C583 | 12 | 4.7uF | CAP, CERM, 4.7 uF, 25 V, +/- 10%, X5R, 0603 | 0603 | GRM188R61E475KE11 D | MuRata | | |
| C175, C180 | 2 | 0.01uF | CAP, CERM, 0.01 uF, 16 V, +/- 10%, X7R, 0402 | 0402 | CC0402KRX7R7BB103 | Yageo | | |
| C176, C182 | 2 | 0.01uF | CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0402 | 0402 | CL05B103KB5NNNC | Samsung Electro-Mechanics | | |
| C178, C193 | 2 | 100pF | CAP, CERM, 100 pF, 50 V, +/- 10%, X7R, 0402 | 0402 | CC0402KRX7R9BB101 | Yageo America | | |
| C179 | 1 | | Cap Ceramic 56pF 50V C0G 5% SMD 0402 125C Paper T/R | 0402 (1005 Metric) | CL05C560JB5NNNC | Samsung | | |
| C181 | 1 | 2700pF | CAP, CERM, 2700 pF, 50 V, +/- 10%, X7R, 0402 | 0402 | CL05B272KB5NNNC | Samsung Electro-Mechanics | | |
| C183 | 1 | 2200pF | CAP, CERM, 2200 pF, 16 V, +/- 10%, X7R, 0201 | 0201 | GRM033R71C222KA88 D | MuRata | | |
| C185, C186, C187, C188, C189 | 5 | 100uF | CAP, TA, 100 uF, 16 V, +/- 20%, 0.1 ohm, SMD | 7343-31 | T495D107M016ATE100 | Kemet | | |
| C190, C247, C252, C350, C356, C360 | 6 | 0.01uF | CAP, CERM, 0.01 uF, 6.3 V, +/- 10%, X7R, 0402 | 0402 | 0402B103K6R3CT | Walsin | | |
| C191, C192 | 2 | 0.033uF | CAP, CERM, 0.033 uF, 25 V, +/- 10%, X7R, 0402 | 0402 | CC0402KRX7R8BB333 | Yageo | | |
| C194 | 1 | 22pF | CAP, CERM, 22 pF, 50 V, +/- 5%, C0G/NP0, 0402 | 0402 | CC0402JRNPO9BN220 | Yageo | | |
| C195 | 1 | 1000pF | CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, 0402 | 0402 | CL05B102KB5NNNC | Samsung Electro-Mechanics | | |
| C196, C197, C237, C238, C239, C240, C241, C242 | 8 | 18pF | CAP, CERM, 18 pF, 50 V, +/- 5%, C0G/NP0, 0402 | 0402 | CC0402JRNPO9BN180 | Yageo | | |
| C199, C201, C235, C236, C243, C244, C245, C249, C250, C358 | 10 | 0.1uF | CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0402 | 0402 | CC0402KRX7R8BB104 | Yageo | | |
| C218, C219, C221, C223, C225, C227, C229, C231, C233 | 9 | 47uF | CAP, CERM, 47 uF, 6.3 V, +/- 10%, X7R, 1210 | 1210 | C1210C476K9RAC7800 | Kemet | | |
| C234 | 1 | 220pF | CAP, CERM, 220 pF, 50 V, +/- 5%, C0G/NP0, 0402 | 0402 | 885012005063 | Würth Elektronik | | |
| C246, C251 | 2 | 1000pF | CAP, CERM, 1000 pF, 10 V, +/- 10%, X7R, 0402 | 0402 | 0402ZC102KAT2A | AVX | | |
| C254, C255, C256, C257, C258, C259, C260, C267, C268, C269, C270, C271, C272, C274, C275, C276, C277, C278, C279, C281, C282, C283, C284, C285, C286, C288, C289, C290, C291, C292, C293, C295, | 86 | 0.22uF | CAP, CERM, 0.22 uF, 10 V, +/- 10%, X7R, 0402 | 0402 | GRM155R71A224KE01 D | MuRata | | |
| C347, C348 | 2 | 27pF | CAP, CERM, 27 pF, 25 V, +/- 5%, C0G/NP0, 0402 | 0402 | C0402C270J3GAC7867 | Kemet | | |
| C377, C378, C379, C380 | 4 | 0.1uF | CAP, CERM, 0.1 uF, 16 V, +/- 10%, X5R, 0201 | 0201 | GRM033C71C104KE14 D | MuRata | | |

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|--|----------|--------|---|---|-------------------------|---------------------------|----------------------|------------------------|
| C388, C395, C398, C405, C423, C430, C448, C467, C473, C474, C491, C492, C507, C508, C509, C510, C511, C512, C513, C514, C515, C516, C517, C518, C519, C520, C521 | 27 | 1uF | CAP, CERM, 1 uF, 6.3 V,+/- 10%, X7R, 0402 | 0402 | GRM155R70J105KA12 D | MuRata | | |
| C422, C429, C438, C447, C465 | 5 | 0.47uF | CAP, CERM, 0.47 uF, 6.3 V,+/- 10%, X7R, 0603 | 0603 | 0603B474K6R3CT | Walsin | | |
| C425, C431, C449, C470 | 4 | 2.2uF | CAP, CERM, 2.2 uF, 10 V, +/- 10%, X7R, 0603 | 0603 | GRM188R71A225KE15 D | MuRata | | |
| C462, C464 | 2 | 330pF | CAP, CERM, 330 pF, 50 V, +/- 10%, X7R, 0603 | 0603 | C0603C331K5RACTU | Kemet | | |
| C472, C503, C506 | 3 | 22uF | CAP, CERM, 22 uF, 10 V,+/- 20%, X6S, 0805 | 0805 | C2012X6S1A226M125A C | TDK | | |
| C564, C566 | 2 | 220pF | CAP, CERM, 220 pF, 50 V,+/- 10%, X7R, 0402 | 0402 | CC0402KRX7R9BB221 | Yageo | | |
| C584, C605, C609 | 3 | 0.01uF | CAP, CERM, 0.01 uF, 25 V,+/- 10%, X7R, 0402 | 0402 | CL05B103KA5NNNC | Samsung Electro-Mechanics | | |
| C585 | 1 | 3.3uF | CAP, CERM, 3.3 uF, 16 V,+/- 10%, X7R, 0805 | 0805 | C2012X7R1C335K125A B | TDK | | |
| C597, C598 | 2 | 6.2pF | CAP, CERM, 6.2 pF, 50 V,+4.032/-4.032%, C0G/NP0, 0402 | 0402 | GJM1555C1H6R2CB01 D | MuRata | | |
| C602, C607, C617, C618 | 4 | 0.1uF | CAP, CERM, 0.1 uF, 10 V,+/- 10%, X7S, 0201 | 0201 | GRM033C71A104KE14 D | MuRata | | |
| D1, D2 | 2 | 28V | Diode, TVS, Uni, 28 V, SMC | SMC | SMCJ28A | Fairchild Semiconductor | | |
| D3, D4, D5, D6, D7, D9, D10, D11, D13, D14, D15, D16, D17, D18, D19, D20, D21, D22, D23, D24, D25, D26, D27 | 23 | Green | LED, Green, SMD | 1.6x0.8x0.8mm | LTST-C190GKT | Lite-On | | |
| D8 | 1 | | 0.5pF Diode Array for USB3.0, uDFN-14 | uDFN-14 | SP3012-06UTG | Littelfuse | | |
| D12 | 1 | Green | LED, Green, SMD | LED_0603 | 150060GS75000 | Würth Elektronik | | |
| F1 | 1 | | Fuse, 8 A, 32VAC/VDC, SMD | 1206 | 0440008.WR | Littelfuse | | |
| FL1, FL2, FL3, FL4, FL5, FL6, FL7 | 7 | 0.47uF | Chip EMIFIL Chip 3-Terminal Capacitor for Large Current for General | 2x1.25mm | NFM21PC474R1C3D | MuRata | | |
| H1, H2, H3, H4 | 4 | | | HEX STANDOFF 6-32 ALUMINUM 1 inch | 8418 | Keystone | | |
| H5, H6, H7, H8 | 4 | | | MACHINE SCREW PAN PHILLIPS 6-32 | PMSSS 632 0038 PH | B&F Fastener Supply | | |
| H9 | 1 | | | MACHINE SCREW PAN PHILLIPS M2 | MPMS 002 0005 PH | B&F Fastener Supply | | |
| J1, J18 | 2 | | Receptacle, 120 Pos Signal, 4 Pos Power, SMT | Receptacle, 120 Pos Signal, 4 Pos Power, SMT | FX23-120S-0.5SV10 | Hirose Electric Co. Ltd. | | |
| J3, J5, J7, J9 | 4 | | Header (shrouded), 100mil, 5x2, High-Temperature, Gold, TH | 5x2 Shrouded header | N2510-6002-RB | 3M | | |
| J10 | 1 | | DC POWER JACK, R/A, TH | DC POWER JACK, R/A, TH | PJ-082BH | CUI Inc. | | |
| J11 | 1 | | Conn Term Block, 2POS, 3.81mm, TH | 2POS Terminal Block | 1727010 | Phoenix Contact | | |
| J12 | 1 | | Connector, RJ45 with integrated magnetics, R/A, TH | RJ-45 Jack | JK0-0229NL | Pulse Engineering | | |
| J13 | 1 | | Receptacle, HDMI, 0.5mm, 19 Pos, R/A, Gold, SMT | Receptacle, HDMI, 0.5mm, 19 Pos, R/A, SMT | 47151-0001 | Molex | | |
| J14 | 1 | | PCI Express M.2 connector, 0.5mm, M Key, Gold, R/A, SMD | Edgeboard, M Key, 0.5mm, SMD | SM3ZS067U410AMR10 00 | JAE Electronics | | |
| J15 | 1 | | MicroSD Card Connector, 1.1mm Pitch, R/A, Tin, SMT | MicroSD Card Connector, 1.1mm Pitch, R/A, SMT | 47352-1001 | Molex | | |
| J16 | 1 | | Connector, Receptacle, USB Mini B 2.0, SMT | Connector, Receptacle, USB Mini B 2.0, 5 Position, SMT | 65100516121 | Würth Elektronik | | |
| J17 | 1 | | Connector, Receptacle, USB 3.1 Type A, R/A, TH | Connector, Receptacle, USB 3.1 Type A, R/A, TH | GSB4111312HR | Amphenol Canada | | |
| J19 | 1 | | Receptacle, 0.5 mm, 30x2, Gold, TH | Receptacle, 0.5 mm, 30x2, TH | QSH-030-01-L-D-A | Samtec | | |
| J20 | 1 | | Connector, Micro High Speed Socket Strip, 0.8mm, 25x2, R/A, SMT | Conn Micro High Speed Socket Strip SKT 50 POS 0.8mm, RA | ERF8-025-01-L-D-RA-L-TR | Samtec | | |

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|--|----------|---------|---|-----------------------------|------------------|-------------------------|----------------------|------------------------|
| L1, L2, L3, L4, L5, L6, L8, L9, L10, L11, L12, L13, L15, L16, L17, L18, L19, L20, L21, L22, L23, L24, L25, L26 | 24 | 120 ohm | Ferrite Bead, 120 ohm @ 100 MHz, 3 A, 0603 | 0603 | BLM18SG121TN1D | MuRata | | |
| L7, L14 | 2 | 2.2uH | Inductor, Shielded, Powdered Iron, 2.2 uH, 2.2 A, 0.042 ohm, SMD | 4x1.8x4 mm | NRS4018T2R2MDGJ | Taiyo Yuden | | |
| L27 | 1 | 1.2uH | Inductor, Shielded, 1.2 uH, 3.5 A, 0.056 ohm, AEC-Q200 Grade 0, SMD | 4.45x4.06mm | SRP4012TA-1R2M | Bourns | | |
| L28, L29 | 2 | 2.2uH | Inductor, Shielded, Powdered Iron, 2.2 uH, 16 A, 0.008 ohm, SMD | SMD, 2-Leads, Body 14x12.8m | SRP1238A-2R2M | Bourns | | |
| L30, L31, L32, L33, L34, L35, L36, L37, L38 | 9 | 1uH | Inductor, Wirewound, 1 uH, 4 A, 0.047 ohm, SMD | 4.45x4.06mm | SRP4012TA-1R0M | Bourns | | |
| L39, L40, L42 | 3 | | Coupled inductor, 1.4 ohm, SMD | 2x1mm | DLP2ADA900HL4L | MuRata | | |
| L41 | 1 | 220 ohm | Ferrite Bead, 220 ohm @ 100 MHz, 2 A, 0805 | 0805 | BLM21PG221SN1D | MuRata | | |
| MD1 | 1 | | MicroSDHC EVO Memory Card 16GB | CARD_MICRO_SD | MB-MP16DA/AM | Samsung | | |
| MD2 | 1 | | 970 PRO NVMe M.2 SSD | NVMe_SSD_CARD | MZ-V7P512BW | Samsung | | |
| MP1 | 1 | | WURTH ELEKTRONIK Spacer, SMT, Swage Round, Steel, 4.35x2.5mm | SPACER_SMT_M2 | 9774025243R | Würth Electronics Inc. | | |
| MP2 | 1 | | Heat Sink Passive Pin Array Adhesive 26.4C/W Black Anodized | HEAT_SINK | BDN10-3CB/A01 | CTS Components | | |
| Q1, Q2, Q3, Q4, Q5 | 5 | 40V | MOSFET, N-CH, 40 V, 100 A, DQJ0008A (VSONP-8) | DQJ0008A | CSD18513Q5A | Texas Instruments | | None |
| Q6 | 1 | -30V | MOSFET, 2-CH, N/P-CH, -30 V, -0.2 A, AEC-Q101, SOT-363 | SOT-363 | NX3008CBKS,115 | Nexperia | | None |
| Q7, Q8, Q10, Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19, Q20 | 13 | 100V | MOSFET, N-CH, 100 V, 0.17 A, SOT-23 | SOT-23 | BSS123 | Fairchild Semiconductor | | None |
| Q9 | 1 | 50V | MOSFET, N-CH, 50 V, 0.22 A, SOT-23 | SOT-23 | BSS138 | Fairchild Semiconductor | | None |
| R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R13, R18, R19, R20, R21, R24, R29, R30, R33, R38, R39, R42, R47, R48, R50, R57, R59, R64, R69, R72, R74, R76, R78, R80, R82, R84, R85, R86, R89, R90, R91, R95, R100, R104, R105, R114, R115, R116, R125, R126, R127, R128, R129, R130, R131, | 188 | 0 | RES, 0, 5%, 0.063 W, 0402 | 0402 | CRCW04020000Z0ED | Vishay-Dale | | |

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|---|----------|-------|--|------------------|------------------|---------------------------|----------------------|------------------------|
| R11, R12, R14, R15, R16, R17, R22, R23, R25, R26, R27, R28, R31, R32, R34, R35, R36, R37, R40, R41, R43, R44, R45, R46, R49, R51, R56, R58, R60, R61, R62, R63, R67, R68, R102, R103, R106, R107, R108, R113, R123, R124, R135, R136, R137, R138, R141, R142, R148, | 101 | 10k | RES, 10 k, 5%, 0.063 W, 0402 | 0402 | CRCW040210K0JNED | Vishay-Dale | | |
| R52 | 1 | 11k | RES, 11 k, 5%, 0.063 W, 0402 | 0402 | CRCW040211K0JNED | Vishay-Dale | | |
| R53 | 1 | 86.6k | RES, 86.6 k, 1%, 0.063 W, 0402 | 0402 | CRCW040286K6FKED | Vishay-Dale | | |
| R54 | 1 | 12k | RES, 12 k, 5%, 0.063 W, 0402 | 0402 | CRCW040212K0JNED | Vishay-Dale | | |
| R55, R81, R97 | 3 | 16k | RES, 16 k, 5%, 0.063 W, 0402 | 0402 | CRCW040216K0JNED | Vishay-Dale | | |
| R65 | 1 | 1.27k | RES, 1.27 k, 1%, 0.063 W, 0402 | 0402 | CRCW04021K27FKED | Vishay-Dale | | |
| R66 | 1 | 4.99k | RES, 4.99 k, 1%, 0.063 W, 0402 | 0402 | CRCW04024K99FKED | Vishay-Dale | | |
| R70 | 1 | 3.57k | RES, 3.57 k, 1%, 0.063 W, 0402 | 0402 | CRCW04023K57FKED | Vishay-Dale | | |
| R71 | 1 | 1.69k | RES, 1.69 k, 1%, 0.063 W, 0402 | 0402 | CRCW04021K69FKED | Vishay-Dale | | |
| R73 | 1 | 1.50k | RES, 1.50 k, 1%, 0.063 W, 0402 | 0402 | CRCW04021K50FKED | Vishay-Dale | | |
| R75, R523 | 2 | 0.005 | RES, 0.005, 1%, 4 W, AEC-Q200 Grade 0, 2728 | 2728 | CSSH2728FT5L00 | Stackpole Electronics Inc | | |
| R77, R93 | 2 | 49.9 | RES, 49.9, 1%, 0.063 W, 0402 | 0402 | CRCW040249R9FKED | Vishay-Dale | | |
| R79 | 1 | 49.9k | RES, 49.9 k, 1%, 0.063 W, 0402 | 0402 | CRCW040249K9FKED | Vishay-Dale | | |
| R83 | 1 | 15.0k | RES, 15.0 k, 1%, 0.063 W, 0402 | 0402 | CRCW040215K0FKED | Vishay-Dale | | |
| R87, R94, R117, R118, R119, R120, R121, R122, R471 | 9 | 1.00k | RES, 1.00 k, 1%, 0.063 W, 0402 | 0402 | CRCW04021K00FKED | Vishay-Dale | | |
| R92, R396 | 2 | 100k | RES, 100 k, 5%, 0.063 W, 0402 | 0402 | CRCW0402100KJNED | Vishay-Dale | | |
| R96 | 1 | 84.5k | RES, 84.5 k, 1%, 0.063 W, 0402 | 0402 | CRCW040284K5FKED | Vishay-Dale | | |
| R98 | 1 | 39k | RES, 39 k, 5%, 0.063 W, 0402 | 0402 | CRCW040239K0JNED | Vishay-Dale | | |
| R101 | 1 | 100k | RES, 100 k, 0.5%, 0.063 W, 0402 | 0402 | CRCW0402100KDHP | Vishay-Dale | | |
| R109, R110 | 2 | 1.6k | RES, 1.6 k, 5%, 0.063 W, 0402 | 0402 | CRCW04021K60JNED | Vishay-Dale | | |
| R111, R112 | 2 | 2.00k | RES, 2.00 k, 1%, 0.063 W, 0402 | 0402 | CRCW04022K00FKED | Vishay-Dale | | |
| R150, R151, R152, R153, R154, R155, R156, R157, R158, R159, R160, R161, R162, R163, R164, R165, R166, R167, R168, R169, R170, R171, R172, R173, R174, R176, R178, R184, R185, R186, R187, R188, | 54 | 36 | RES, 36, 5%, 0.063 W, AEC-Q200 Grade 0, 0402 | 0402 | CRCW040236R0JNED | Vishay-Dale | | |

| Designator | Quantity | Value | Description | PackageReference | PartNumber | Manufacturer | Alternate PartNumber | Alternate Manufacturer |
|--|----------|-------|--|------------------|-----------------------|---------------|----------------------|------------------------|
| R175, R179, R209, R214, R220, R221, R222, R223, R224, R504, R506, R508, R510, R511, R512 | 15 | 4.7k | RES, 4.7 k, 5%, 0.063 W, 0402 | 0402 | CRCW04024K70JNED | Vishay-Dale | | |
| R181, R182, R183, R215, R216 | 5 | 240 | RES, 240, 5%, 0.063 W, 0402 | 0402 | CRCW0402240RJNED | Vishay-Dale | | |
| R219 | 1 | 11.0k | RES, 11.0 k, 1%, 0.063 W, 0402 | 0402 | CRCW040211K0FKED | Vishay-Dale | | |
| R226, R228 | 2 | 5.76k | RES, 5.76 k, 1%, 0.063 W, 0402 | 0402 | CRCW04025K76FKED | Vishay-Dale | | |
| R234, R236 | 2 | 2.49k | RES, 2.49 k, 1%, 0.063 W, 0402 | 0402 | CRCW04022K49FKED | Vishay-Dale | | |
| R242, R275, R276, R277, R278, R279, R280, R387, R388, R389, R391, R533, R537 | 13 | 10.0k | RES, 10.0 k, 0.5%, 0.063 W, 0402 | 0402 | CRCW040210K0DHED P | Vishay-Dale | | |
| R243, R244, R245, R378, R384, R385 | 6 | 220 | RES, 220, 5%, 0.063 W, 0402 | 0402 | CRCW0402220RJNED | Vishay-Dale | | |
| R266, R267, R310, R311, R334, R335, R558, R559 | 8 | 2.20k | RES, 2.20 k, 1%, 0.063 W, 0402 | 0402 | CRCW04022K20FKED | Vishay-Dale | | |
| R268, R269, R270, R271, R272, R273 | 6 | 33 | RES, 33, 5%, 0.063 W, 0402 | 0402 | CRCW040233R0JNED | Vishay-Dale | | |
| R281, R282, R283, R284, R285, R286, R412, R413, R414, R415, R416, R417, R418, R419, R420, R421, R422, R423, R424, R425, R426, R427, R428, R429, R430, R431, R432, R433, R434, R435, R436, R437, | 35 | 10.0 | RES, 10.0, 1%, 0.063 W, 0402 | 0402 | CRCW040210R0FKED | Vishay-Dale | | |
| R292, R304, R305, R306, R307 | 5 | 47k | RES, 47 k, 5%, 0.063 W, 0402 | 0402 | CRCW040247K0JNED | Vishay-Dale | | |
| R355, R356, R357, R358, R359, R360, R369, R382, R528, R530 | 10 | 1.0k | RES, 1.0 k, 5%, 0.063 W, 0402 | 0402 | CRCW04021K00JNED | Vishay-Dale | | |
| R383 | 1 | 12.0k | RES, 12.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402 | 0402 | CRCW040212K0FKED | Vishay-Dale | | |
| R390 | 1 | 2.0k | RES, 2.0 k, 5%, 0.063 W, 0402 | 0402 | CRCW04022K00JNED | Vishay-Dale | | |
| R392, R393 | 2 | 0 | RES, 0, 5%, 0.05 W, 0201 | 0201 | CRCW02010000Z0ED | Vishay-Dale | | |
| R395 | 1 | 47 | RES, 47, 5%, 0.063 W, 0402 | 0402 | CRCW040247R0JNED | Vishay-Dale | | |
| R398 | 1 | 680k | RES, 680 k, 5%, 0.063 W, 0402 | 0402 | CRCW0402680KJNED | Vishay-Dale | | |
| R399 | 1 | 330k | RES, 330 k, 5%, 0.063 W, 0402 | 0402 | CRCW0402330KJNED | Vishay-Dale | | |
| R457, R466 | 2 | 10.0 | RES, 10.0, 0.1%, 0.1 W, 0603 | 0603 | RT0603BRD0710RL | Yageo America | | |

| Designator | Quantity | Value | Description | PackageReference | PartNumber | Manufacturer | Alternate PartNumber | Alternate Manufacturer |
|--|----------|-------|---|--|--------------------------|--------------------------------|----------------------|--------------------------------|
| R470, R472, R473, R474, R477, R478, R479, R480, R482, R484, R485, R486, R487, R491, R492, R493, R497, R498, R499 | 19 | 422 | RES, 422, 1%, 0.063 W, 0402 | 0402 | CRCW0402422RFKED | Vishay-Dale | | |
| R475, R476, R481, R483, R488, R489, R490, R494, R495, R496, R500, R501, R502 | 13 | 510 | RES, 510, 5%, 0.063 W, 0402 | 0402 | CRCW0402510RJNED | Vishay-Dale | | |
| R503 | 1 | 100 | RES, 100, 1%, 0.063 W, 0402 | 0402 | CRCW0402100RFKED | Vishay-Dale | | |
| R538, R539 | 2 | 50 | RES, 50, 1%, 0.125 W, AEC-Q200 Grade 1, 0402 | 0402 | 504L50R0FTNCFT | AT Ceramics | | |
| R557 | 1 | 200k | RES, 200 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402 | 0402 | CRCW0402200KJNED | Vishay-Dale | | |
| S1, S2, S3 | 3 | | Switch, SPST-NO, Off-Mom, 0.05 A, 12 VDC, TH | 7.3x6.5mm | TL1105RF160Q | E-Switch | | |
| S4 | 1 | | DIP Switch, SPST, 6Pos, Slide, SMT | 8.75x6.2mm | TDA06H0SB1 | C&K Components | | |
| TP28, TP35, TP41, TP56, TP58, TP60, TP62, TP64, TP66, TP68, TP70, TP72, TP74, TP78, TP80, TP86, TP88, TP91, TP93, TP95 | 20 | | Test Point, Miniature, Red, TH | Red Miniature Testpoint | 5000 | Keystone | | |
| TP29, TP30, TP31, TP32, TP33, TP34, TP37, TP43, TP57, TP59, TP61, TP63, TP65, TP67, TP69, TP71, TP73, TP75, TP79, TP81, TP87, TP89, TP92, TP94, TP96 | 25 | | Test Point, Miniature, Black, TH | Black Miniature Testpoint | 5001 | Keystone | | |
| U1, U5, U9, U11 | 4 | | CrossLink Automotive Family, FBGA-80 | CTFBGA-80 | LIA-MD6000-6JMG80E | Lattice | | |
| U2, U6 | 2 | | Automotive 250mA Ultralow-Noise Low-IQ LDO, DBV0005A (SOT-23-5) | DBV0005A | LP5907QMFx-2.5Q1 | Texas Instruments | | Texas Instruments |
| U3, U7 | 2 | | Buck Step Down Regulator with 2 to 6 V Input and 1.2 V Output, -40 to 85 degC, 6-Pin SON (DRV), Green (RoHS & no Sb/Br) | DRV0006A | TPS62262DRVR | Texas Instruments | | |
| U4, U8, U10, U12 | 4 | | 3V 128M-BIT [x 1/x 2/x 4] CMOS MXSMIO (SERIAL MULTI I/O) FLASH MEMORY, SOP-8 | SOP-8 | MX25L12835FM2I-10G | Macronix International Co., LT | MX25L12845G | Macronix International Co., LT |
| U13 | 1 | | Automotive 2.95V to 6V Input, 2A, 2MHz Synchronous Step-Down SWIFT(TM) DCDC Converter, RTE0016F (WQFN-16) | RTE0016F | TPS57112QRTERQ1 | Texas Instruments | | Texas Instruments |
| U14 | 1 | | Sink and Source DDR Termination Regulator, DRC0010J (VSON-10) | DRC0010J | TPS51200AQDRCRQ1 | Texas Instruments | TPS51200QDRCRQ1 | Texas Instruments |
| U15, U16 | 2 | | Automotive Catalog Single Output LDO, 1.5A, Adj. (0.8 to 3.6V), Programmable Soft-Start, RGW0020A (VQFN- 20) | RGW0020A | TPS74801QRGWRQ1 | Texas Instruments | | Texas Instruments |
| U17 | 1 | | Zero Iq Reverse Polarity Protection Smart Diode Controller, DGK0008A (VSSOP-8) | DGK0008A | LM74610QDGKRQ1 | Texas Instruments | | Texas Instruments |
| U18 | 1 | | Automotive Low Iq Dual Synchronous Buck Controller with Frequency Spread Spectrum, DAP0038B (TSSOP- 38) | DAP0038B | TPS43351QDAPRQ1 | Texas Instruments | | Texas Instruments |
| U19 | 1 | | Pushbutton On/Off Controller, SOT-23-8 | SOT23, 8-Leads, Body 2.9x1.625mm, Pitch 0.65mm | LTC2950ITS8- 1#TRMPBF | Linear Technology | | |

| Designator | Quantity | Value | Description | PackageReference | PartNumber | Manufacturer | Alternate PartNumber | Alternate Manufacturer |
|---|----------|-------|---|---|----------------------------|---------------------|----------------------|------------------------|
| U20 | 1 | | Automotive 3.15V to 5.5V, 7 Buck & 6 LDO Power Management IC (PMIC) for ARM Cortex A15 Processors, ZWS0169A (NFBGA-169) | ZWS0169A | O9039A387IZWSRQ1 | Texas Instruments | | Texas Instruments |
| U21 | 1 | | 5.5V, 4A, 16mΩ Automotive Load Switch With Adjustable Rise Time and Optional Quick Output Discharge, DSG0008B (WSON-8) | DSG0008B | TPS22965TDSGRQ1 | Texas Instruments | TPS22965TDSGTQ1 | Texas Instruments |
| U22 | 1 | | ADAS Applications Processor, ABC0760A (FCBGA-760) | ABC0760A | X5777BXGABC | Texas Instruments | | Texas Instruments |
| U23, U24 | 2 | | Single 2-Input Positive-AND Gate, DCK0005A, SMALL T&R | DCK0005A | SN74LVC1G08DCKT | Texas Instruments | | |
| U25, U26, U27, U28, U29 | 5 | | SDRAM - DDR3L Memory IC 8Gb (512M x 16) Parallel 800MHz 13.75ns 96-FBGA (14x9) | FBGA96 | AS4C512M16D3L-12BIN | Alliance Memory | MT41K512M16HA-125 A | Micron Technology |
| U30 | 1 | | Gigabit Ethernet PHY Customized for Harsh Industrial Environments, RGZ0048B (VQFN-48) | RGZ0048B | DP83867IRRGZR | Texas Instruments | DP83867IRRGZT | Texas Instruments |
| U31 | 1 | | Single 2-Input Positive-AND Gate, DBV0005A, LARGE T&R | DBV0005A | SN74LVC1G08DBVR | Texas Instruments | | Texas Instruments |
| U32, U33 | 2 | | Automotive 4-Channel ESD Protection Solution for SuperSpeed (up to 5 Gbps) Interface, DQA0010A (USON-10) | DQA0010A | TPD4E05U06QDQARQ1 | Texas Instruments | | Texas Instruments |
| U34 | 1 | | Value-Line HDMI Companion Chip for Portable Applications, 12 Channels, -40 to +85 degC, 24-pin TSSOP (PW), Green (RoHS & no Sb/Br) | PW0024A | TPD12S016PWR | Texas Instruments | | |
| U35 | 1 | | 5.5V, 4A, 16mΩ Automotive Load Switch With Adjustable Rise Time and Optional Quick Output Discharge, DSG0008B (WSON-8) | DSG0008B | TPS22965NQWDSGRQ1 | Texas Instruments | | Texas Instruments |
| U36, U37, U46 | 3 | | Automotive Catalog Dual 4-Channel Analog Multiplexer/Demultiplexer, PW0016A (TSSOP-16) | PW0016A | SN74LV4052AQPWRQ1 | Texas Instruments | | Texas Instruments |
| U38 | 1 | | 3V, Multiple I/O, 4KB, 32KB, 64KB Sector Erase, SOIC-16 | SOIC, 16-Leads, Body 10.3x7.5mm, Pitch 1.27mm | MT25QL01GBBB8ESF-0SIT | Micron Technology | | |
| U39, U40 | 2 | | Low Quiescent Current, Programmable-Delay Supervisory Circuit, 1 Supply Monitored, -40 to 125 degC, 6-pin SOT-23 (DBV), Green (RoHS & no Sb/Br) | DBV0006A | TPS3808G09DBVR | Texas Instruments | | |
| U41, U42, U43, U44 | 4 | | Automotive Catalog Low-Capacitance + / - 15 kV ESD-Protection Array for High-Speed Data Inter, 2 Channels, 40 to +85 degC, 5-pin SOT (DRL), Green (RoHS & no Sb/Br) | DRL0005A | TPD2E001IDRLRQ1 | Texas Instruments | | |
| U45 | 1 | | Automotive Low-Voltage 16-Bit I2C and SMBus Low-Power I/O Expander, PW0024A (TSSOP-24) | PW0024A | TCA9539QPWRQ1 | Texas Instruments | | Texas Instruments |
| U47 | 1 | | Dual High Speed USB To Multipurpose UART/FIFO IC, LQFP-64 | LQFP_10x10mm | FT2232HL-REEL | FTDI | | |
| U48 | 1 | | Enhanced Product Cap-Free, Nmos, 400-Ma Low-Dropout Regulator W/ Reverse Current Protection, DBV0005A (SOT-23-5) | DBV0005A | TPS73633MDBVREP | Texas Instruments | | |
| U49 | 1 | | Automotive USB 2-Ch Data Line Short-to-Battery, Short-to-VBUS, and IEC ESD protection, DGS0010A (VSSOP-10) | DGS0010A | TPD2S701QDGSRQ1 | Texas Instruments | | Texas Instruments |
| U50 | 1 | | 4-Bit Dual-Supply Bus Transceiver with Configurable Voltage-Level Shifting and 3-State Outputs, RSV0016A (UQFN-16) | RSV0016A | SN74AVC4T245RSVR | Texas Instruments | | Texas Instruments |
| U51 | 1 | | 1K Microwire Compatible Serial EEPROM, SOT-23-6 | SOT-23-6 | 93LC46BT-I/OT | Microchip | | |
| U52 | 1 | | Current-Limited, Power-Distribution Switches, DBV0005A (SOT-23-5) | DBV0005A | TPS2065DDBVR | Texas Instruments | TPS2065DDBVT | Texas Instruments |
| U53 | 1 | | Single Power Supply BUFFER Logic Level Shifter (no enable), DBV0005A, LARGE T&R | DBV0005A | SN74LV1T34DBVR | Texas Instruments | | Texas Instruments |
| U54 | 1 | | Single Inverter, DBV0005A, LARGE T&R | DBV0005A | SN74LVC1G04DBVR | Texas Instruments | | Texas Instruments |
| U55, U57, U62, U64 | 4 | | 24-Bit Bus-Exchange Switch with -2V Undershoot Protection, TVSOP-56, DGV0056A (TVSOP-56) | DGV0056A | SN74CBT16212CDGVR | Texas Instruments | | Texas Instruments |
| U56, U63 | 2 | | Single Inverter, DCK0005A, LARGE T&R | DCK0005A | SN74LVC1G04DCKR | Texas Instruments | | Texas Instruments |
| U58, U65 | 2 | | Single Bus Buffer Gate With 3-State Outputs, DBV0005A, SMALL T&R | DBV0005A | SN74LVC1G125DBVT | Texas Instruments | | Texas Instruments |
| U59, U66, U67 | 3 | | Low-Voltage 4-Bit 1-Of-2 FET Multiplexer/Demultiplexer, DGV0016A (TVSOP-16) | DGV0016A | SN74CBTLV3257DGVR | Texas Instruments | | Texas Instruments |
| U60, U61 | 2 | | Octal Bus Transceiver With 3-State Outputs, RGY0020A, LARGE T&R | RGY0020A | SN74LVC245ARGYR | Texas Instruments | | |
| U68 | 1 | | Automotive Dual Bidirectional I2C Bus and SMBus Voltage-Level Translator, DCU0008A (VSSOP-8) | DCU0008A | PCA9306IDCURQ1 | Texas Instruments | | |
| U69 | 1 | | Single Buffer/Driver With Open-Drain Output, DCK0005A, LARGE T&R | DCK0005A | SN74LVC1G07DCKR | Texas Instruments | | |
| U70 | 1 | | 256 kb I2C CMOS Serial EEPROM, SOIC-8 | SOIC-8 | CAT24C256WI-GT3 | ON Semiconductor | | |
| Y1 | 1 | | Crystal, 16.384 MHz, 12 pF, AEC-Q200 Grade 1, SMD | 3.2x2.5mm | ABM8AIG-16.384MHZ-12-2Z-T3 | Abracon Corporation | | |
| Y2, Y3 | 2 | | Crystal, 20 MHz, 18pF, SMD | Crystal, 3.2x1.1x5.x mm | ABM3B-20.000MHZ-B2-T | Abracon Corporation | | |
| Y4 | 1 | | CRYSTAL, 32.768KHZ, 12.5PF, SMD | 3.2x0.9x1.5mm | ABS07-32.768KHZ-T | Abracon Corporation | | |
| Y5 | 1 | | Crystal, 25 MHz, 12pF, AEC-Q200 Grade 1, SMD | 3.2x2.5mm | ABM8AIG-25.000MHZ-12-2Z-T3 | Abracon Corporation | | |
| Y6 | 1 | | Crystal, 12 MHz, 8 pF, AEC-Q200 Grade 1, SMD | 3.2x2.5mm | CX3225CA12000D0HSSCC | Kyocera | | |
| C384 | 0 | 0.1uF | CAP, CERM, 0.1 uF, 6.3 V, +/- 10%, X7R, 0402 | 0402 | GRM155R70J104KA01D | MuRata | | |
| FID1, FID2, FID3, FID4, FID5, FID6 | 0 | | Fiducial mark. There is nothing to buy or mount. | N/A | N/A | N/A | | |
| J2, J4, J6, J8 | 0 | | Header, 100mil, 2x1, Tin, TH | Header 2x1 | 90120-0122 | Molex | | |
| R88, R144, R261, R262, R301, R340, R342, R344, R346, R509, R555 | 0 | 0 | RES, 0, 5%, 0.063 W, 0402 | 0402 | CRCW04020000Z0ED | Vishay-Dale | | |
| R99 | 0 | 9.1k | RES, 9.1 k, 5%, 0.063 W, 0402 | 0402 | CRCW04029K10JNED | Vishay-Dale | | |
| R227, R229, R230, R231, R232, R233 | 0 | 5.76k | RES, 5.76 k, 1%, 0.063 W, 0402 | 0402 | CRCW04025K76FKED | Vishay-Dale | | |

| Designator | Quantity | Value | Description | PackageReference | PartNumber | Manufacturer | Alternate PartNumber | Alternate Manufacturer |
|--|----------|-------|-----------------------------------|------------------|------------------|--------------|----------------------|------------------------|
| R235, R237, R238, R239, R240, R241 | 0 | 2.49k | RES, 2.49 k, 1%, 0.063 W, 0402 | 0402 | CRCW04022K49FKED | Vishay-Dale | | |
| R337, R338, R534 | 0 | 10k | RES, 10 k, 5%, 0.063 W, 0402 | 0402 | CRCW040210K0JNED | Vishay-Dale | | |
| R529 | 0 | 1.0k | RES, 1.0 k, 5%, 0.063 W, 0402 | 0402 | CRCW04021K00JNED | Vishay-Dale | | |
| SH-J1, SH- J2, SH-J3, SH-J4 | 0 | 1x2 | Shunt, 100mil, Gold plated, Black | Shunt | 969102-0000-DA | 3M | SNT-100-BK-G | Samtec |

Notes:

Unless otherwise noted in the Alternate PartNumber and/or Alternate Manufacturer columns, all parts may be substituted with equivalents.

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